

A note on the longevity of the Mountain Brushtail Possum, *Trichosurus caninus* in the montane ash forests of the Central Highlands of Victoria

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The Mountain Brushtail Possum, *Trichosurus caninus* is a species of arboreal marsupial confined to forest habitats in eastern Australia (How 1983, Smith and Winter 1984, Lindenmayer *et al.* 1990). It is common in montane ash-type eucalypt forests in the Central Highlands of Victoria (Lindenmayer 1989, Lindenmayer *et al.* 1990) where the plant communities are dominated by *Eucalyptus regnans*, *E. delegatensis* or *E. nitens*.

Detailed studies of the diet of *T. caninus* were completed at Cambarville (37°33'S latitude and 145°53'E longitude) in the montane ash forests of the Central Highlands of Victoria between 1980 and 1982 (Seebeck *et al.* 1984). A total of thirty (30) animals were ear tattooed with chisel point numbers and green dye during this study (Warneke and Seebeck unpublished data). A radio tracking program has recently commenced at Cambarville (Lindenmayer *et al.* unpublished data) and this has involved extensive and intensive trapping of arboreal marsupials in the area. Several *T. caninus* were captured in late August and early September 1990. Of these, two (2) adult *T. caninus* were trapped that had been ear-marked during studies by Seebeck *et al.* (1984) and Warneke and Seebeck (unpublished data). One of these animals (male #45) was first captured in March 1982 and weighed 2.55 kg. This animal weighed 2.40 kg when it was recaptured in September 1982. The body weight of male #45 when caught in September 1990 was

2.79 kg. The other individual (male #32) weighed 2.60 kg in June 1981 and 2.88 kg when captured again in 1990. Changes in observed body weight in the interval between captures were relatively small (< 400g). As *T. caninus* completes maturation at three (3) years of age (How 1981) these differences in body weight are more likely to be associated with seasonal variation in (Warneke and Seebeck unpublished data) than increases in body size. Data on body weight indicate that the two *T. caninus* were adult when first captured and were therefore at least 10 or more years old when recaptured in spring of 1990.

Information from previous studies (Warneke and Seebeck unpublished data) also showed that these animals were trapped within approximately 250 m from where they were first caught and marked.

How (1972, 1978) found that some adult *T. caninus* lived in excess of 10 years which is a similar result to those reported here. Our findings show that *T. caninus* has strong range affinity remaining in, or close to the area where the animals were first trapped. These data support the results of How (1978, 1981) who proposed that post-dispersal adult *T. caninus* are both long lived and relatively sedentary.

Our findings indicate that fluorescent dye used to mark the external ear-convex of mammals remains legible for a long period. Thus the technique has considerable merit for use in long term studies of wildlife particularly those where animals need to be readily and regularly identified in the field. Furthermore, the age of animals marked in this manner can be relatively accurately determined when re-captured. This has an advantage over

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techniques of age determination based on external body characteristics such as head, pes and ear length used by How (1976). These allowed older animals to be categorised as only those 3 or more years old (How 1976).

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